



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

15671.

e. 56.

Pl. from Harvard



600050434M

15671

e. 56

C



ADDRESS
TO THE PUBLIC,
RELATIVE TO
Some supposed failures of the
COW-POX,
AT REPTON AND ITS NEIGHBOURHOOD,
WITH
Observations
ON THE EFFICACY AND GENERAL EXPEDIENCY
OF
VACCINATION,
AND ON THE
INJURIOUS CONSEQUENCES OF
INOCULATION
FOR THE
Small-pox.

BURTON-UPON-TRENT :
PRINTED AND SOLD BY THOMAS WAYTE.

1821.



ADDRESS,

&c.



THE spreading of the small-pox at Repton and its vicinity, by inoculation, has, within the last half year, obtained a sanction and an encouragement which could not have been surpassed had not the invaluable discovery of vaccination been heard of in that district—the number of the inoculated in the short space of a few months having been estimated at upwards of five hundred! For the preceding ten or fifteen years the practice of vaccination had been general in the places into which the small-pox was now introduced; consequently, numerous instances have occurred of the vaccinated individuals being exposed to the variolous contagion by living in the midst of the contaminated atmosphere. Many of the persons also who had had the cow-pox underwent the operation of variolous inoculation. The vaccinated persons were thus, as it were, made the subjects of a violent experiment—a violent experiment, we may add, which has afforded striking examples and abundant proof of the efficacy of vaccination.

In consequence, however, of two persons having died of the small-pox, and of others having been afflicted with the dangerous confluent form of that destructive malady, who were *supposed* to have had the cow-pox, and who, in fact had been inoculated *for* it—not with vaccine lymph, observe, but pustular matter!—in consequence, in other words, of the anomalous cases of variolous eruptions (that is, small-pox modified and mitigated by vaccination) in those who had gone through the cow-pox satisfactorily, not having been contradistinguished from the severe cases of small-pox subsequent to *spurious vaccination*, an unnecessary distrust and alarm has been excited as to the safety and security of the practice. An investigation was obviously called for; and we beg to submit what we have made out by our investigation respecting the alledged Repton failures of the cow-pox to the attention of the public.

It is necessary to observe in the first place, that there are two classes of vaccinated persons at Repton and its neighbourhood—the one class having been vaccinated by physicians and surgeons, the other class by a farrier. It was in the class vaccinated by the farrier that pustular matter was used in place of vaccine lymph—hence the persons so vaccinated received no protection whatever against the power of the variolous contagion—hence the severe confluent form of these cases of small-pox—hence two of these vaccinated persons, residing within a few doors from each

other, were attacked with small-pox and became victims of the disease.

That pustular cow-pox will not protect the constitution from the action of variolous contagion is a fact which the history of vaccination proves to have been long known. It is, indeed, infectious as the farrier's cases imply; but it is no more capable of preventing the small-pox than of causing it. Perfect vaccination also leaves a permanent cicatrice; yet in several of the persons vaccinated by the farrier no cicatrice is to be found. We do not contend that none of the persons whom he vaccinated were secured from the small-pox; but that none were who had been inoculated with the pustular matter. When he used vaccine lymph, he has, we know, succeeded in producing regular cow-pox. To give an example—at Milton he vaccinated a person in his usual inefficient manner: no cicatrice remained to indicate the vaccination. The person on exposure to the variolous contagion, of course, caught the small pox, and had the disease in the confluent form. In the same family, about a year or two after vaccinating this person, he vaccinated two others with vaccine lymph—regular cicatrices remain. These persons were living in the same house with the small-pox patient, and were often in the same room, yet the variolous contagion has had no effect upon either of them. That the farrier should have occasionally succeeded in his practice of vaccination ought not to excite surprise; for in the same

house with this small-pox patient was another person who had been vaccinated by an *old woman*—distinct cicatrices remain. This person also with the other two, has entirely resisted the infection of the small-pox.

Having now done with this class of vaccinated persons, we have to bring into notice the class vaccinated by the physicians and surgeons.

With respect to this class, it is necessary to remark, that vaccination was introduced into Repton about 20 years ago, that is, when the practice was in its infancy, and therefore before several causes of imperfect vaccination which have since been found out could have been known, much less remedied or avoided. Two of the causes of imperfect vaccination, which in early practice were unknown, and which, in modern practice, by some are too frequently overlooked, are, first, the use of lymph taken from the pock at too late a period, when it has either lost some of its original properties or has become totally inefficient; or, secondly, the excessive inflammation of the vesicle, converting the vaccine lymph into common pus or matter. One of us lately met with a failure from this latter cause of imperfect vaccination, in a person who had been vaccinated seventeen or eighteen years ago. He caught the small-pox; although his brother, who had also been vaccinated, and had not been subject to the excessive inflammation of the vesicle, resisted the variolous contagion on the fullest exposure to it. This

kind of imperfect vaccination is denoted by a large irregular cicatrice—it is to be remedied in the same way as any other sort of imperfect vaccination, namely, re-vaccination. Further: it has been established, that, however genuine the vaccine lymph be, the first vaccination not only *may* but in many instances *will* be imperfect. An instructive table has been published, to shew the number of instances in five hundred, in which the first vaccination, from various peculiarities of the process, will be unsatisfactory, and in which a second vaccination, for full security, is required. The number is considerable. Now the test of re-vaccination had not been tried in the class of persons vaccinated by the physicians and surgeons, consequently for the reasons we have given, the vaccination of *some* of these persons *must* have been incomplete—and what, if instances of modified or mitigated or vaccine small-pox at Repton and its neighbourhood have thereby been less infrequent than they otherwise would have been, is the collective and uniform experience which this and other nations have, for the space of 20 or 30 years been affording, of the efficacy and general expediency of vaccination, to be set at nought *by a sheer accident*? But to state a few of the leading facts: The *whole number* of vaccinated persons in a house have been exposed to variolous contagion from the effluvia of persons labouring under the small-pox in the same house, without effect. The *whole number* of vaccinated persons in a house

have been inoculated for the small-pox, and several again and again—but without effect. The number of persons ill of the small-pox in a house has been two, and the number of vaccinated persons in the same house has also been two—the latter have mixed with the former—have occasionally slept in the same bed with them, and have not caught the small-pox. In a house at Burton, into which the variolous infection has indirectly come from Repton, all the children who had not been vaccinated have been severely afflicted with the small-pox; while, on the contrary, all those who had been vaccinated, have not had the slightest symptom of the disease. The number of the former is three, of the latter two. To go back to Repton—The whole number of vaccinated persons who have lived in the same house has been four, and all have been inoculated for the small pox once or twice—without effect. The whole number of vaccinated persons in the same house has even been *eight!* Inoculation and re-inoculation for the small-pox has had no effect, —*but that of thoroughly convincing the family of the efficacy of vaccination!* In a word, the result of the exposure of this class of vaccinated persons to variolous contagion, or the subjecting of them to inoculation for the small-pox, has been such as would have established our confidence in the efficacy of vaccination, had not that, on ample experience, have been fully established before.

We now come to shew the *impracticability* of preventing the ravages of small-pox by the inoculation of it with its own *virus* or contagion, and to point out the injurious consequences of the practice of it to the community.

To give some idea of the magnitude of the evil which the inoculation for the small-pox has to remedy—the natural small-pox kills one in every six, and often one in every four, of the persons whom it attacks. When grown-up persons have the natural small-pox, it has been calculated that the disease destroys 35 out of every 100 of those afflicted with it. Such being the premises, it follows, that the destruction of human beings by small-pox alone has been prodigious. Since the year 1665, when the plague raged in London, the deaths from the small-pox *recorded within the bills of mortality*, have amounted to more than 300,000. The deaths from the plague were about 70,000; and though “the term plague carries a sound of greater horror and dismay,” as expressed by an eminent writer, “yet we should probably be within the truth if we were to assert that small-pox has destroyed a hundred for every one that has perished by the plague!” Now let it be admitted, that only one person in every three hundred affected, will die of inoculated small-pox, yet it is undeniable that whatever advantage the inoculation for that disease may be to the individuals inoculated, with the public at large the consequences of it have proved a heavy calamity.

To proceed to particulars—the inoculated small-pox is as infectious as the natural small-pox, and its contagion is equally capable of spreading the disease in an aggravated and malignant form. It has, indeed, been established by the most irrefragable evidence, that inoculation for the small-pox *adds* to the general mortality of the disease, by opening a new source for the diffusion of its *virus* or contagion. Inoculation for the small-pox was introduced into this kingdom about a century ago; and when the practice became general it was ascertained, that so far from the number of deaths from small-pox being diminished, that the ratio of mortality of that disease to the total mortality was very considerably augmented. Even at Repton, nine or ten persons have died of the small-pox, or its immediate consequences, since the commencement of the system of inoculation. We do not mean that more have died of the *inoculated* small-pox at Repton than is common and usual under the best mode of treatment; but that, in consequence of the *practice* of inoculation, the mortality from the small-pox has in all probability been greater at Repton in a few months than it had been in that town for 10 or 15 years past, and, by abstaining from the inoculation, would have been in that town for 10 or 15 years to come. In an excellent article in the Edinburgh Review, relative to vaccination, the question of the expediency or in expediency of small-pox inoculation is fully, ably, and impartially discussed. As

the conclusions arrived at are such as are supported by general experience, and as the discussion affords a complete view of the subject in all its bearings, we are induced to give it at length for the convenience and benefit of such of our readers as may not have the Edinburgh Review at hand for immediate reference. It is proper to premise that the article was written in 1806, that is, before vaccination had become general in this kingdom, or in other words, before the practice of inoculation for the small-pox had in any considerable measure been abandoned.

“Inoculation was brought into this country nearly one hundred years ago; and a most noble and blessed discovery it certainly was, as it put it in the power of every one to diminish the hazard to which he was formerly subjected, in a most important degree. Of those who have the disorder naturally, we have already said, that one is found to die in six. Of inoculated patients, only one dies in 250. This, at least, is Dr. Willan's calculation; and we are persuaded it is very near the truth. In London, where it ought to be best ascertained, some eminent practitioners have stated the proportion to be so high as 1 in 100. The zealous antivaccinists have denied it to be greater, under judicious treatment, than 1 in 1000. It cannot be denied, however, that besides this risk of life, the disease, even under this mitigated form, has frequently proved an exciting cause to scrophula, and other dreadful distempers, and has

often been attended with blindness and deformity. In this situation, it was not, perhaps, to be wondered at, that many individuals hesitated to expose their children spontaneously to a risk of such magnitude, and flattered themselves that, by carefully secluding them from occasions of infection, the danger might be smaller on the whole than that which they would certainly encounter by inoculation. The consequence of these impressions, independent of many superstitious antipathies, was, inevitably, that inoculation could never be *universally* adopted; and the result, however extraordinary it may at first appear, has been clearly proved to have been *an increased mortality* upon the whole, in consequence of its partial adoption. To explain this, it is only necessary to recollect, that the inoculated small-pox is an *infectious* disease, as well as the natural small-pox; and that those who take it naturally from an inoculated patient, uniformly have it as violently as if they had been infected from a case of spontaneous disease: it is to all intents and purposes the natural small-pox again in them. Now, if it be considered that several hundred thousand persons have been annually inoculated in these kingdoms for the last fifty years, it will be easy to calculate the immense addition that must have been made in that period to the cases of actual disease, and the increase of natural small-pox that may be supposed to have arisen from this constant multiplication of the sources and centres of infection.

From a calculation made by Dr. Heberden, without any view to this question, it appears, accordingly, that for the last thirty years of the last century, there were *ninety-five* persons died of small-pox in London out of every *thousand* reported in the bills of mortality; while the average number, before the introduction of inoculation, was only *seventy* in every *thousand*. Another calculation, made upon two periods of forty years, before and after inoculation was adopted, makes the proportion only as eighty-nine to seventy-two; but whichever of these we adopt, the increase of the total mortality must appear to be very formidable; more especially if it be considered that these calculations are made for the case of the metropolis, where the risk of infection, even before the use of inoculation, must at all times have been greater than in the less crowded districts of the country. In a general view, we may safely set down the additional mortality produced by the partial use of this admirable remedy, at little less than one fourth of the whole. Inoculation, therefore, though in itself a most precious and beneficent invention, has not hitherto been of any essential benefit to the community. Though many individuals have profited by it, it has destroyed more lives, upon the whole, than it has preserved, and has aggravated the sufferings of those who have refused to employ it, in a greater degree, than it has relieved those who have availed themselves of its protection. What sort of an evil the small-pox still is,

in spite of the vaunted palliative of inoculation, may be judged of from the fact, that *forty thousand persons are supposed to die of it every year in Great Britain*, and that it actually kills one out of every ten who enter the bills of mortality." *Edin. Rev.* vol. IX. page 83.

Such, then, is the *rationality* of attempting to prevent the havoc of the small-pox by the inoculation of it with its own *virus*, in place of trusting to the protection of the vaccine. The heads of the chief arguments for and against the practice of vaccination and inoculation for the small-pox are as follow—

1. The cow-pox is a complaint which neither requires confinement nor medical treatment.

2. The inoculated small-pox is a severe and protracted disease in some cases, and a dangerous and fatal disease in others.

3. The inoculation for the small-pox, by enlarging the sphere of contagion, augments the general mortality of the disease.

4. The survivors of the inoculated small-pox obtain their protection from an attack of natural small-pox—partly at the peril of their own, and partly by the sacrifice of the lives of other persons.

5. The small-pox subsequent to the vaccine is not to be compared in severity to the casual or even the inoculated small-pox—and the inoculated small-pox destroys one person in every *three hundred* of those who are subjected to it, while not one

in *three thousand* of vaccinated persons will die of small-pox on the fullest exposure to its infection.

6. Persons who survive the inoculated small-pox (every practical purpose being considered) enjoy no more security from *death* by a future attack of small-pox, than do those persons who receive their protection against the invasion of that disease on the easy terms of vaccination.

7. "Vaccination possesses powers adequate to the great end proposed by its meritorious discoverer, in his first promulgation of it in 1798, namely, The total extirpation of the small-pox."

As what we have just affirmed relative to the adequateness of vaccination to extirpate the small-pox, may appear to some of our readers to amount only to a speculative *opinion*; we are induced to observe, that the whole of the last proposition is extracted from a treatise on the cow-pox by one of distinguished authority in the profession—Sir Gilbert Blane, Bart, physician to the King—a treatise, which is not only replete with valuable information on the subject of vaccination in general, but which contains also much interesting historical evidence of the *fact* of vaccination having already accomplished the important end of extirpating the small-pox from several parts of the globe where it had heretofore caused the greatest mortality.

As some mistaken notions prevail in respect of danger from small-pox subsequent to vaccination, we will make a few observations on this subject.

The danger from inoculated or casual small-pox proceeds from what, in medical language, is called SECONDARY FEVER. This secondary fever does not commence till the eleventh day of the disease—the day also on which the eruption in regular small-pox comes to its height. Now the small-pox, after the vaccine, is without *secondary fever*, and, consequently, is devoid of danger. The small-pox, too, after vaccination, compared with the regular small-pox, is not only a *mild* but a *short* complaint. The eruption of the *regular small-pox*, we have said, does not come to its height before the eleventh day of the disease; but the eruption of the small-pox subsequent to vaccination, commonly arrives at its height in about five days, and not infrequently in three days. “The disorder, then,” as Sir Gilbert Blane observes, “abruptly stops short, and the recovery proceeds without the least danger or inconvenience.” The small-pox, therefore, after vaccination, differing in these essential particulars so much from the *regular small-pox*, has been denominated, by way of distinction, the “modified,” the “mitigated,” or the “*five-day small-pox*.” One of the most temperate and judicious opposers of vaccination collected 48 cases of casual small-pox subsequent to vaccination, and published them. Eight of the persons who were the subjects of these cases, at the lowest computation, would have lost their lives by the small-pox had they not obtained the protection of

the cow-pox—not one of the cases, however, had a fatal termination—not one of these patients had any *secondary fever*—and the cases are, for the most part, so many apt examples of the modified or mitigated, or *five-day small-pox*. In the instances of small-pox which occasionally occur after vaccination, the controlling power of the cow-pox, indeed, has made itself manifest to the prejudices even of the most ignorant, and the occurrences of modified small-pox has hence had the very best effects in establishing the credit of vaccination. Again, the degree of secondary fever in the regular small-pox, is proportionate to the quantity and confluence of the eruption; but however copious and confluent the eruption of the small-pox subsequent to vaccination may now and then happen to be, the controlling power of the cow-pox prevents the formation of secondary fever altogether; and by the eleventh day, the day for the secondary fever to commence, the patient will be convalescent! To instance the case of the person before alluded to, who lately had modified small-pox after having been vaccinated imperfectly seventeen or eighteen years ago—the quantity and confluence of the eruption was such that, without the controlling power of the vaccine, the secondary fever, to a moral certainty, would have been considerable,—yet there was *none*. Ere the eleventh day the height of the disorder was gone by; and on that day, so far from there being any tendency to secondary fever, the person was

cheerful—his pulse was down—and what he most complained of was that of being hungry.—If, then, the cow-pox does not in every instance prevent the small-pox, let it be borne in mind that it prevents the *regular* small-pox, and, therefore, that it prevents *death* from small-pox. We will here just notice, that though the process of vaccination be imperfect, and that small-pox is not prevented in consequence, yet, if genuine lymph has been employed, the general fact is, that the modifying and controlling power of the cow-pox will be most satisfactorily demonstrated.

The small-pox, then, after vaccination, is totally without secondary fever, and, in consequence, is totally without danger. *This is is the general rule.* In several thousand instances, however, an *exception* may possibly occur. Among a many thousand vaccinated persons *one* may possibly be attacked with the *regular* small-pox, and the disease, in this one case may possibly prove fatal. In like manner, *an exception to the general rule* of the small-pox contagion having the power of affecting the constitution but once during the life of an individual may possibly occur. *Exceptions*, indeed, of a second attack of small-pox have occurred, and will continue to occur over and over again; and the risk of *death* from small-pox after small-pox, is, to all intents and purposes, equal to any risk of such an event from small-pox after vaccination. Be this as it may—in the application of experience to anticipate the future from

the past in the various pursuits of mankind, whether speculative or active, and consequently, whether to determine the choice of means in the ordinary business of common life, or the choice of expedients in the responsible avocations of practical medicine, a right judgment is to be formed from the general rule,—not from the exception. It is a common maxim that “*knowledge is power*,”—it may be so; not, however, the mere knowledge of past events and occurrences, though ever so varied and extended; but the knowledge of those general *rules* or *laws* which phenomena *observe* and *obey*. In this sense, perhaps, “knowledge is power;” at least, without such knowledge of general rules and laws, “it “would be impossible for man” (to cite authority on these somewhat abstract propositions,*) to apply to future events the results of past experience—to derive benefit from experience; and the powers of observation and of memory would be subservient only to the gratification of idle curiosity.” It is chiefly by the right “application of experience to anticipate *what is yet to happen*,” according to the authority just cited, “which forms the intellectual superiority of one individual above another;” and, to exemplify, it is to the sagacity and skill with which Dr. Jenner for the benefit of mankind” *did* form conclusions from past experience with respect to the future, that the

*Elements of the Philosophy of the Human Mind, by Dugald Stewart, Esq., vol. 2. pp 209, 216, 4to ed.

proud pre-eminence of his justly exalted character is mainly to be ascribed, and the momentous discovery of vaccination is wholly to be attributed. As to *reasoning* from the exceptions, *regardless* of general rules or laws, to anticipate what will happen in any individual or any number of instances, if it can be called reasoning, it is at best but reasoning for the purpose of ERROR and of IGNORANCE—for the purpose, in plain terms, of opposing the progress of TRUTH and the advancement of SCIENCE.

We will now take our leave of the town of Repton, and go to the city of Norwich—that is to say, having done with the prejudices at Repton against vaccination, we will bring this public address to a close, by adducing *recent evidence* relative to the cow-pox, from other places.

The epidemic small-pox visited Norwich last year and committed great havoc. Mr. Cross, a celebrated surgeon of Norwich, has published a history of the epidemic. No less than 3000 of the inhabitants of Norwich had the small-pox during the epidemic, and no less than 530 of these 3000 persons lost their lives by it. Mr. Cross states that the epidemic “was comparatively dormant during the winter, but when the season became milder, it burst upon us suddenly and unexpectedly, and continued its work of devastation for three or four months with undiminished fury;” and it accordingly appears, that in the months of May, June, July, and August, the burials

from the small-pox in these four months amounted to *four hundred and fifty*. Individuals who had had the small-pox, were attacked with the *regular* small-pox a second time. Instances of small-pox subsequent to vaccination also occurred; but of *ten thousand* vaccinated persons living in the midst of the virulent contagion only *two* died of the small-pox!

To state further particulars—Mr. Cross kept a regular register of 200 cases of small-pox, which occurred in 112 families. In forty-two of these families, *ninety one* vaccinated persons were living with the persons afflicted with the small-pox. “As the lowest classes of the poor were the sufferers,” (in the words of Mr. Cross,) “the *ninety-one* vaccinated persons were continually in the same room, and often lay in the same bed with the small-pox patients.” *Two* only, of the whole *ninety one*, had modified small-pox; and in one of the two the disease was limited to twenty pocks, and lasted only six days before it began to decline. “With these two exceptions,” Mr. Cross states, “*all* the vaccinated escaped from any indisposition or eruption, notwithstanding their intimate exposure to the variolous contagion, which was of the most malignant nature, as it proved fatal amongst the *unvaccinated* in twelve families where the vaccinated, *living in the same room*, remained safe.” Mr. Cross then observes, that, “were separate cases of protection of much weight, I might introduce my own as an example, having had the

cow-pox about twenty years ago, which has secured me from danger during the plentiful exposure to variolous contagion." Mr. Cross then proceeds to state "that *several hundreds* of those vaccinated from the earliest period of the practice until within a few weeks, have been subjected to the additional test of inoculation with variolous matter during the epidemic; and, *in no instance*, has regular small-pox, as far as I have been able to ascertain, been produced. In about one in fifty a spurious eruption has appeared in some, presenting a few irregular pimples, and in others, resembling the variolous pock; but I have not learned that the latter have ever proceeded regularly,—invariably drying up in four or five days, and never taking the course of the regular small-pox."

After proceeding at great length with similar details of the efficaciousness of the cow-pox, the historian of the Norwich epidemic gives this conclusion—that nothing whatever has occurred during the *whole period of the epidemic* which can have any "weight against the practice of vaccination, when compared with 10,000 vaccinated individuals living in the midst of the contaminated atmosphere—with 530 deaths amongst little more than 3000 who had neglected to be vaccinated, and with the occasional occurrence of the *regular* small-pox in those who formerly had the disease either naturally or by inoculation."

10 From what has been related of the bad consequences of the practice of inoculation for the small-pox, it will be obvious that, "had the 10,000 vaccinated persons," as appositely observed by the Edinburgh medical Reviewer, "been protected by variolous inoculation, conducted in the best manner, and in the most favourable circumstances, at least 33 of them, (1 in 300) would have died of the process intended to protect them; so that, in comparing the advantages of the two methods of protection we have to weigh 33 deaths *certain*, against two *contingent* on the invasion of an epidemic small-pox." We have, then, to take into consideration the number of deaths from casual small-pox, which the inoculation of 10,000 persons for that disease, at different periods of time, would necessarily occasion. These deaths, from casual small-pox, would not be less than 150 or 200. After all, we have to consider whether it were not possible that *more* than two of the survivors of 10,000 persons subjected to inoculated small-pox might not take fatal small-pox on exposure at a subsequent period of life to a virulent contagion. Upon the whole, whoever *believes* that 10,000 vaccinated persons were exposed to variolous contagion at Norwich under the circumstances and with the result specified by Mr. Cross, must also *believe* that the efficacy and general expediency of the practice of vaccination is fully established. The conviction which such conclusive evidence, in respect of vaccination,

would produce in the mind of any one satisfied of the truth of the evidence must be immediate and irresistible. The question, then, of the efficacy or inefficacy, the expediency or in expediency, of the practice of vaccination, resolves itself at last into a mere question of *testimony*, namely,—whether, because all prejudice against vaccination is not yet entirely eradicated, the testimony of a relator of the efficacy of vaccination ought to be admitted as *evidence*? To any one who may seriously be disposed to attach any discredit to the evidence in respect of vaccination which the city of Norwich has afforded, as recorded by Mr. Cross, we might safely say, that it would be just as rational for you to attempt to prove that the History of the Norwich epidemic small-pox, written by *Mr. Cross*, has been entirely fabricated by *Messrs. Burgess and Hill*, the respectable booksellers who published the work.

We will here briefly notice, that in the city of Edinburgh, in the towns of Lanark and Perth, and in other parts of Scotland, the epidemic small-pox prevailed about a year or two ago, as it did last year at Norwich. Hundreds of *unprotected* persons were destroyed by it. *Thousands of vaccinated* persons, as at Norwich, were exposed to the *virus* of the small-pox—and the whole result of the variolous epidemic in Scotland, as at Norwich, has afforded (to borrow the expressions of an able writer on the subject) “THE MOST
“TRIUMPHANT EVIDENCE IN FAVOUR OF

VACCINATION, AND HAS PLACED IN A MOST CONSPICUOUS POINT OF VIEW, THE INFINITE ADVANTAGES TO BE DERIVED FROM THE PROCESS WHEN JUDICIOUSLY CONDUCTED."

We will now give a few passages from the last annual report of the National Vaccine Establishment to the Secretary of State for the Home Department.

"The practice of vaccination was begun in the Small-pox Hospital of London, in the year 1799, soon after the promulgation of Dr. Jenner's discovery, and has been continued to the present day. In the last annual report, it is stated by Dr. Ashburner, that the benefit of vaccination has been extended within the year to 3,297 persons; that *one only* of the 42,662 cases mentioned in former reports has since been affected with the varioloid eruption occurring after vaccination."

"Under the immediate direction of the National Vaccine Establishment, more than 60,000 persons have now been vaccinated in London and its vicinity; and of this large number, only five are reported to have been subsequently affected with small-pox, although positive orders are given at every station to report all such cases as are even suspected."

"The career of vaccination, however, appears to have been less brilliant in its native country, than in some parts of the continent of Europe, where the practice of it is enforced by legal enactments, and the inoculation for the small-pox is prohibited

by severe penalties. Under such regulations, it is affirmed, that the small-pox has ceased to exist in **DENMARK** for the last eight years; and that the knowledge of this fact has now induced his Danish Majesty to proclaim the same decrees in his **WEST INDIA COLONIES.**"

"An important letter, together with a treatise on this subject, has been transmitted to the Board from Dr. Kraus, an intelligent physician, who is charged with the superintendence of vaccination in the circle of Rezat in **BAVARIA**. He affirms that in that circle, containing *half a million of people*, small-pox has never occurred *since the year 1807*.

The following extracts are from Sir Gilbert Blane's treatise before mentioned.

"In the summer of 1811, the author was called to visit professionally Don Francisco de Salazar, who had arrived a few days before in London, on his route from Lima to Cadiz, as a deputy to the Spanish Cortes.—He informed him that vaccination had been practised with so much energy and success in **LIMA**, that for the last twelve months there had occurred not only no death from, but no case of small-pox; that the new-born children of all ranks are carried as regularly to the vaccinating-house as to the font of baptism; that the small-pox is entirely *extinguished all over PERU*, nearly so in **CHILI**; and that there has been no compulsory interference on the part of the Government to promote vaccination!"

Before giving the next extract from the same treatise, it may be proper to observe, that previous to the introduction of vaccination into PERU—the depopulation by deaths from small-pox was so great in that vast territory of South America, as to form a prominent feature in its history.

“What a mortifying contrast does England form with PERU, where vaccination was adopted instantly in consequence of a flash of conviction from the light of evidence!—and was not this conviction fully justified by the immediate disappearance of small-pox from the whole region? To those nations who may feel an envy of the glory attached to our country by this discovery, it must be no small consolation to perceive that a large proportion of the English nation has hitherto been so *besotted as not to know how to appreciate it, nor how to avail themselves of it; and that it has encountered more opposition among ourselves than from all the world besides!*”

As to the evidence of second attacks of small-pox, which a faulty arrangement of what we have written has prevented us from producing in its proper place—during the variolous epidemic in Scotland which we have already noticed, 71 cases of small-pox occurring for the second time, are recorded. Three of these cases proved fatal,—“giving a proportion of deaths nearly as 1 in 23.” Small-pox, therefore, after small-pox, is obviously a less modified and less mitigated complaint than small-pox after vaccination. The modifying, the

controlling power of cow-pox, to use other words, is very considerably greater than the modifying and controlling power of the small-pox; and consequently the risk of *death* from a second attack of small-pox is very considerably greater than any risk of it from small-pox subsequent to vaccination. These 71 cases of secondary small-pox are recorded by Dr. Thompson, Professor of Military Surgery in the University of Edinburgh in the account of this epidemic which he has published. This work of Dr. Thompson's on the variolous epidemic of Scotland, has promulgated many important truths respecting vaccination before unknown, and is, besides, a Repository of such a body of evidence in favour of vaccination, as, with reflecting minds, must set the question of the efficacy of the practice at rest for ever. To return—The National Vaccine Establishment received intelligence of 21 cases of small-pox occurring after small-pox, within the twelve months preceding their last report; three of which cases were fatal. In addition to what we have already stated of the occurrence of secondary small-pox during the epidemic at Norwich, it appears that “10 of Mr. Cross's correspondents, although not solicited on the subject, sent him information of cases of secondary small-pox which had occurred to them both before and during the year 1819; of these, three are stated to have been fatal.” To give separate cases of secondary small-pox—The celebrated De Haen has related several very clear

cases of second small-pox which occurred in his own practice. One young man, a student of Law, received the infection twice within three years. The first attack left him pitted; the second was fatal. A very striking case of this sort is related in the Memoirs of the Medical Society, in London—it is that of Mr. Langford, whose countenance was remarkably pitted and seamed by a malignant small-pox, so as to attract the notice of all who saw him. Yet at the age of fifty he was attacked again with confluent small-pox, which proved fatal to him, and to another member of his family, five of whom received the infection from him. The case of secondary small-pox related by Dr Bateman in the second volume of the Medico-chirurgical Transactions, may also be particularized—it is this—"Frances Baird, aged 25, residing at No. 3, Bowl & Pin Alley, Chancery Lane, London, nursed with great care and assiduity an infant nine months old during the progress of confluent small-pox of which it died." She, in consequence, caught the small-pox, and had it in a very severe manner. Doctors Laird and Birkbeck saw the patient with Dr Bateman. "Her mother expressed surprise at the occurrence, since she affirmed that the patient had undergone the casual small-pox in her infancy in so severe a degree that her life was despaired of, and that the medical attendant called it the "putrid small-pox," and that she had been blind six days—all of which was corroborated by numerous pits with

which her face was thickly marked." This case affords another fact which we must not omit to notice. "My patient," observes Dr. Bateman, "was the mother of three children; one of which was seven years of age and the other three and a half. Both these had undergone vaccination at the age of eleven months respectively; i. e. the one six years preceding this occurrence, and the other nearly three; and although they both resided in the same apartment with the mother, during the progress of the fatal small-pox in the infant, they remained altogether free from complaint—the *cow-pox* having, in these instances, effected a security which the *small-pox* itself had failed to produce." In consequence of the diffusion of the *virus* of the small-pox from Repton, an example of secondary small-pox accompanied with all the material circumstances of the last-mentioned case, has occurred in this district—not the case of the secondary small-pox at Hilton, which is a complete example of the kind—but the following one which has happened at Burton. Mrs. — has been seized with the distinct small-pox, and is just recovered from it. Two of her children had been vaccinated and were living with her; and although they were fully exposed to the infection by being in the same room with their mother at the latter period of the disease, yet neither of them caught the small-pox, nor since the exposure has had an eruption of any kind. The mother had the inoculated small-pox

when about 6 or 7 years old, and the eruption left pits. The number of pustules in this second attack of small-pox were about 1000; and the urgency of the symptoms of the disease, and the prostration of strength left by it were considerable. We may here observe that, from the superior modifying power of the cow-pox, had the same quantity of variolous eruption occurred after vaccination, the inconvenience from the disease would have been comparatively trifling.

Having had repeated occasions to notice the prejudice which vaccination has had to contend with almost exclusively in this kingdom, it remains for us to make known what is the opinion of the medical profession in general on this subject. For this purpose we will introduce a very interesting Letter on vaccination which Dr Jenner has lately addressed to a lady resident near Devizes, which has been published in the Courier and other newspapers. The whole letter is as follows:

—
 "MY DEAR MADAM,

You ask me if I have any reason to doubt the efficacy of vaccination, as a certain preventive of the infection of small-pox. Various, you tell me, are the opinions on this subject; I beg pardon for opposing your declaration; BE ASSURED THERE IS BUT ONE OPINION AMONG MEDICAL MEN WHO HAVE CONDUCTED THE PRACTICE WITH THAT ATTENTION WHICH IT REQUIRES, ACCORDING TO THE RULES I HAVE PRECISELY LAID DOWN. This island might have been entirely freed from the pestilence many years ago, if its wisdom in this respect had kept pace with many of the Continental

kingdoms, where small-pox has been entirely unknown for many years; and for ages previously to the introduction of the new practice, it had frequently raged with uncontrollable fury. I do not know how its merits can be set in a more intelligible or convincing point of view, than by giving you the substance of a quotation from a very recent publication on the subject by Mr. Cross, an eminent surgeon of Norwich, where, through the folly and absurdity of the people, the small-pox lately committed great havoc. He tells us that 10,000 of this population who had been vaccinated, lived in the midst of a contaminated atmosphere, and the exceptions to complete protection, after perfect vaccination, were so few as not to be worth detailing; on the other hand, out of 3000 who had neglected to be vaccinated, 530 individuals died, and some who had had regular small-pox, caught the disease a second time!! What you have heard respecting my opinion of re-vaccinating in seven years, has no foundation in truth. Perfect vaccination is permanent in its influence. It is quite terrible to see the obstinacy of the people, but the basis of it rests with the superior orders; coercion, however, has never a good effect, but quite the contrary. It is shocking to contrast the conduct of the people at home with that of those abroad. Let the country be ever so extensive, ever so populous, where vaccination has been solely and universally propagated, small-pox has been wholly got rid of, and never brought back again, even after periods of years have elapsed in most instances. I am very sorry to find the poor people around you are so infatuated, but does the fault lie with them? I remain, dear Madam, very faithfully your's,

EDWARD JENNER.

Berkeley, Jan. 11, 1821.

To conclude—as the different subjects of discussion contained in this pamphlet are enumerated in the title-page, a formal recapitulation cannot be required. We beg, however, to direct the attention of the public in a particular manner to

the series of propositions, as advanced in pages 14 and 15, which form the chief arguments for and against the practice of vaccination and the inoculation for the small-pox; and we trust that what we have adduced in several parts of this pamphlet completely establishes the truth of every assertion which those propositions contain. Let it be remembered, then, that the inoculated small-pox is a severe and protracted disease in some cases, and a dangerous and fatal disease in others—that the practice of inoculation, by enlarging the sphere of contagion, very considerably augments the mortality from small-pox—that the survivors of the inoculated small-pox are no more exempted from **DANGER** from a future attack of small-pox, than those persons are who obtain protection from that disease on the easy terms of vaccination.

Let us add, that the question of the expediency of vaccination is one of the greatest importance,—not merely in a medical point of view; for that vaccination has the power of entirely extirpating the small-pox, **PERU** alone has sufficiently evinced. Whether, therefore, vaccination is to be promoted, or the inoculation for the small-pox is to be re-established—whether 40,000 individuals are or are not to be annually destroyed in Great Britain by the ravages of the small-pox—whether in Great Britain alone this immense sacrifice of life is to be endured—a sacrifice of life far exceeding any that has ever resulted from the barbarous customs of uncivilized society—is a practical question which falls more within the province of poli-

tical than of medical science, and which the *Legislator* and not the *Physician* must ultimately determine. Let us exhort all those who are prejudiced against vaccination seriously to consider, that the belief in the efficacy of it is universal among medical men—and that this belief is founded, not on *hypothesis* but on *fact*—not on *theory* but *experience*,—the experience, too, not of an individual, nor of an individual *village*, town, or even city, but the collective and uniform experience which NATIONS have for Years been affording of the efficaciousness of the practice. Let it be admitted that here and there, as at *Repton*, an individual in the medical profession may be found *destitute of faith in vaccination*—still the *exceptions* to the persuasion of the efficacy and general expediency of the practice being with medical men universal, like the *exceptions* to THE COMPLETE PROTECTION OF THE TEN THOUSAND VACCINATED PERSONS AT NORWICH FROM SMALL-POX, “*are so few, as,*” in the language of Dr. Jenner, “*not to be worth detailing!*”

Rupert Chawner, M. D.

John Spender,

S. Sep. Allen,

Benjamin Granger,

 *Surgeons.*

*Burton-upon-Trent,
March 2nd, 1821.*

Printed by Thomas Warte,
High-street, Burton-upon-Trent.





